REMARKS

The Office Action dated December 24, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 16 and 18-35 have been amended to more particularly point out and distinctly claim the subject matter of the invention. New claim 36 has been added. No new matter has been added. Claims 16-36 are currently pending in the application and are respectfully submitted for consideration.

The Office Action rejected claims 32-34 under 35 U.S.C. §101 because the claimed invention is allegedly directed to non-statutory subject matter. In particular, the Office Action alleged that the claimed "computer readable medium" may be a signal per se and is therefore directed to a transmission media that is non-statutory. Applicants respectfully submit that this rejection is moot for the following reasons.

In an effort to expedite prosecution, Applicants have amended claims 32-34 to recite "computer readable storage medium," as suggested by the Office Action. Accordingly, Applicants submit that claims 32-34 cannot be considered to be directed to a signal. Applicants therefore request withdrawal of this rejection.

The Office Action rejected claims 16, 18, 21, 22, 25, 28, 29, 31, 32, 34, and 35 under 35 U.S.C. §102(e) as being anticipated by Yamamoto (U.S. Patent Pub. No. 2003/0084191). This rejection is respectfully traversed for at least the following reasons.

Claim 16, upon which claims 17-20 are dependent, recites a method including checking a destination address of a received packet by an intermediate node configured to arrange data transmission between a first device and a second device in a local area networking system. At least the second device is configured to multicast and/or broadcast messages. The method further includes comparing the destination address of the packet with at least one predetermined multicast and/or broadcast address, and preventing, in the system, the transmission of the packet to the first device if the addresses match. Multicast messages from the first device are forwarded by the intermediate node.

Claim 21 recites a system including a first device, a second device, and an intermediate node configured to arrange data transmission between the first device and the second device. At least the second device is configured to multicast and/or broadcast messages to devices in the system, and the system is configured to check the destination address of a received packet. T he system is also configured to compare the destination address of the packet with at least one predetermined multicast and/or broadcast address, and to prevent in the system the transmission of the packet to the first device if the addresses match. The system is configured to forward multicast messages from the first device.

Claim 22, upon which claims 23-28 and 36 are dependent, recites an apparatus including a processor. The processor is configured to check the destination address of a received packet. The apparatus includes an intermediate node configured to arrange data

transmission between a first device and a second device in a local area networking system. The processor is also configured to compare the destination address of the packet with at least one predetermined multicast and/or broadcast address, and prevent the transmission of the packet in the system to the first device if the addresses match. The apparatus is configured to forward multicast messages from the first device.

Claim 29, upon which claims 30 and 31 are dependent, recites an apparatus including a processor configured to check a destination address of a received packet. The processor is further configured to compare the destination address of the packet with at least one predetermined multicast and/or broadcast address, and prevent transmission of the packet to a first device if the addresses match. The apparatus is configured to forward multicast messages from the first device.

Claim 32, upon which claims 33 and 34 are dependent, recites a computer readable storage medium storing a computer program. The computer program is configured to control a processor to check a destination address of a received packet, compare the destination address of the packet with at least one predetermined multicast and/or broadcast address, prevent transmission of the packet in the system to a first device if the addresses match, and forward multicast messages from the first device.

Claim 35 recites an apparatus including means for checking a destination address of a received packet. The apparatus further includes means for comparing the destination address of the packet with at least one predetermined multicast and/or broadcast address, means for preventing transmission of the packet to a first device if the addresses match,

and means for forwarding multicast messages from the first device.

In view of the above recited embodiments of the invention, an advantage of the method and arrangements of the invention is that less processing is required in the first device, because fewer messages are received. As a result, the power consumption of the constrained devices such as handheld PDAs, mobile stations, or music players can be reduced. For bandwidth limited links the reduced bandwidth usage is naturally also an advantage, and thus a faster link is available for other data transmission. As the transfer of multicast and/or broadcast messages is reduced, the response time of the system and the average propagation time are shorter. Further, the (first) devices not receiving multicast messages can still support all functions of the system, e.g. full UPnP stack, to be available in case they are connected to the system such that multicast messages can be received. This makes it easier to reach full compatibility with the second device for example for enabling connectivity in configurations where there is direct connection between the first and the second device. One further advantage of the invention is that it is easy to implement for various technologies, thereby enabling a reduction in the costs of the end product.

As will be discussed below, Yamamoto fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

Yamamoto discloses an IP multicast relay system. The system includes a center and subscriber systems connected thereto via both an IP network and a transmission

network. A center sender receives multicast data having a particular multicast address via a center LAN to which a multicast server that sends multicast data to the center LAN is connected, and relays the multicast data to the transmission network. A filter unit is connected between the center LAN and the IP network and prevents the multicast data having the particular multicast data from being sent to the IP network. A receiver unit is provided in the subscriber system. The receiver unit receives the multicast data via the transmission network and sends the multicast data to a subscriber LAN to which the IP network and a multicast receiver terminal are connected.

Applicants respectfully submit that Yamamoto fails to disclose or suggest all of the elements of the present claims. For example, Yamamoto does not disclose or suggest "preventing... the transmission of the packet to the first device if the addresses match," as recited in claim 16 and similarly recited in claims 21, 22, 29, 32, and 35.

According to an embodiment of the invention, a message is received and the destination address of the received message is checked. An intermediate node may compare one or more properties of the message to the properties determined in predetermined message transmission conditions, and if they match, the message is, depending on the implementation, prevented from being transmitted to the first device. (See specification, figure 3).

Yamamoto, on the other hand, fails to disclose the preventing of transmission of multicast and/or broadcast messages in the system to the first device. Rather, Yamamoto only discloses a filter unit 3 that is part of the center 30. The center 30 still transfers a

multicast packet filtered by the filter unit 3 to the terminal (by the center sender 1). (See Yamamoto, paragraph [0037] and step 2-11 in Figure 2).

Specifically, referring to paragraph 0011, lines 9-12, Yamamoto discloses "a filter unit that is connected between the center LAN and the IP network and prevents the multicast data having particular multicast data from being sent to the IP network." Thus, according to Yamamoto, the purpose of the filter unit, in the embodiment described in paragraphs 0048 and 0049 of Yamamoto, is to relay only unicast data to the IP network, while the transmission network will always transmit multicast data.

Embodiments of the present invention, on the other hand, do not separate the unicast data to be relayed by one type of network (e.g., the IP network of Yamamoto) and the multicast data to be transmitted by another type of network (e.g., the transmission network of Yamamoto). Instead, as recited in the present claims, the transmission of a packet having a destination address matching with at least one predetermined multicast and/or broadcast address is prevented in the local area networking system.

According to Yamamoto, the same multicast addresses are registered with the filter 1b (Figure 3) and Filter 3 (Figure 3; 10; CMTS). In particular, Yamamoto states that "[i]f the multicast address of multicast data (4-1) (the same as multicast data (2-10)) coincides with the registered multicast address or one of the registered addresses, data is relayed from the filter 1b to RF transmitter 1c, so that resultant multicast data (2-11) is sent to the CATV transmission network 9a.... The same multicast addresses as the above mentioned registered multicast addresses have been registered with filter 3 in the CMTS

10 (Figure3). In the sequence being considered, the multicast address of multicast data (2-10) coincides with one of the registered multicast addresses. Thus, the filter 3 discards the multicast data and does not perform relay operation" (Yamamoto, paragraph 0049, lines 1-16). However, Applicants note that the multicast data has already been transmitted by Filter 3. In other words, as stated in paragraph 0011 of Yamamoto, the filter unit of the (IP multicast relay) system of Yamamoto prevents transmission of multicast data from being sent to IP network, but the center sender of the system relays the multicast data to the (other) transmission network.

Yamamoto, therefore, merely discloses a solution for determining an alternative route for transferring multicast data to a receiving device. The system of Yamamoto just transmits the multicast data to the receiving device (via the network 9 instead of the IP network 8).

As mentioned above, Yamamoto is switching traffic between the transmission network and the IP network depending on a sending address and a request for unicast or multicast data. Stated another way, in Yamamoto, the multicast traffic does reach In-House Receiver of Subscriber System (of Yamamoto) either as unicast (via IP network) or as multicast (via transmission network) data. According to embodiments of the present invention, on the other hand, the multicast messages are in some situations prevented in the system from reaching the first device.

Applicants note that, according to certain embodiments of the present invention, not all the multicast messages from second device are prevented from being relayed to

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first device (MHD). Additionally, as illustrated in Figure 3 of the present application, more detailed checks can happen in steps 302/303 to optimize the delivery depending on message type, etc. In any case, Applicants submit that it is clear that Yamamoto fails to disclose or suggest "preventing... the transmission of the packet to the first device if the addresses match," as recited in claim 16 and similarly recited in claims 21, 22, 29, 32, and 35.

Furthermore, Applicants respectfully submit that Yamamoto fails to disclose or suggest that "multicast messages from the first device are forwarded by the intermediate node," as recited in claim 16. Similarly, Yamamoto fails to disclose or suggest forwarding "multicast messages from the first device," as recited in claims 21, 22, 29, 32, and 35. In fact, Yamamoto does not disclose or suggest any multicasting from the subscriber system. As such, Yamamoto does not disclose that multicast messages are forwarded from the first device.

For at least the reasons discussed above, Applicants respectfully submit that Yamamoto fails to disclose or suggest all of the elements of claims 16, 21, 22, 29, 32, and 35. It is therefore respectfully requested that the rejection of claims 16, 21, 22, 29, 32, and 35 be withdrawn.

Claims 18, 25, 28, 31, and 34 are dependent upon claims 16, 22, 29, and 32, respectively. As such, claims 18, 25, 28, 31, and 34 should be allowed for at least their dependence upon claims 16, 22, 29, and 32, and for the specific limitations recited therein.

Claims 17, 19, 20, 23, 24, 26, 27, 30, and 33 were rejected under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Vasisht (U.S. Patent Pub. No. 2004/0133689). The Office Action took the position that Yamamoto discloses all of the elements of the present claims, with the exception of the intermediate node connecting networks that use different data transmission protocols. The Office Action then cited Vasisht as allegedly curing this deficiency in Yamamoto. This rejection is respectfully traversed for at least the following reasons.

Yamamoto is outlined above. Vasisht discloses a system, method, device, and computer program product for configuring a communications network for a user are provided. The system, method, device, and computer program product include assigning a network identifier to a communications network of a user, the network identifier being unique to an instantiation of the communications network, and automatically generating a plurality of unique network configuration settings for one or more network devices of the communications network based on the network identifier.

Claims 17, 19, 20, 23, 24, 26, 27, 30, and 33 are dependent upon claims 16, 22, 29, and 32, respectively. As discussed above, Yamamoto fails to disclose or suggest all of the elements of claims 16, 22, 29, and 32. Furthermore, Vasisht does not cure the deficiencies in Yamamoto, as Vasisht also fails to disclose or suggest "preventing... the transmission of the packet to the first device if the addresses match," and "wherein multicast messages from the first device are forwarded by the intermediate node." Accordingly, the combination of Yamamoto and Vasisht fails to disclose or suggest all of

the elements of claims 17, 19, 20, 23, 24, 26, 27, 30, and 33. Additionally, claims 17, 19, 20, 23, 24, 26, 27, 30, and 33 should be allowed for at least their dependence upon claims 16, 22, 29, and 32, and for the specific limitations recited therein.

For at least the reasons discussed above, Applicants respectfully submit that the cited prior art fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 16-36 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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Majid S. AlBassam
Registration No. 54,749

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Vienna, Virginia 22182-6212
Telephone: 703-720-7800
Fax: 703-720-7802

MSA:jf